Termite Monitor 1987

Termite and Carpenter Ant Control

City of Toronto Planning and Development Department
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Research and Information Section
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This report was prepared with the co-operation of the Buildings and Inspections Department.

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- to 392-7620, respecting the City's termite inspection program and the availability of grants for termite or carpenter ant control.

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INTRODUCTION

INTRODUCTION

In May 1983 the City of Toronto Planning and Development Department, in co-operation with the City's Buildings and Inspections Department, published a comprehensive study under the title, A Review and Evaluation of Toronto's Termite Control Program. That study, along with a concise version highlighting its findings in the form of Research Bulletin 21 (entitled "The Edible City") was submitted to City Council through its Neighbourhoods Committee in June 1983.

This document is the third in the annual "Termite Monitor" series started in 1985 by the Planning and Development Department. Its purpose is to:

- serve as a progress report on matters relevant to the City's Termite Control Program, supported where necessary by basic statistical data;

- serve also as the annual report on the operation of the Termite Control program, required from the City by the Provincial Ministry of the Environment as a condition for continuing its financial support.

The report is of interest to property owners, real estate professionals and other concerned groups and individuals.

For a full understanding of the termite problem, readers are referred to the 1983 study. That document dealt with the history of the problem, the nature of the insect, the geographic distribution and intensity of infestation in the City to the end of 1982. It also traced the evolution of the City's termite control program and evaluated its operation in terms of effectiveness, including chemical and physical methods of prevention and treatment then (and now) in use. It included a review and discussion of the relevant legislation, pointed out the areas where action was required and made recommendations for dealing more effectively with the problem. The study also included information on the carpenter ant infestation and treatment program which, though not eligible for Provincial grants, nevertheless is provided with much smaller grants from the City.

The statistics quoted in the 1983 study were for the period up to about the end of 1982. Because of the manner in which records were maintained, analysis of statistics on termite and carpenter ant infestation was not possible until 1983. Therefore, the statistics up to 1982 for Wards 4-9 include a small number of carpenter ant cases. No termite infestation has so far come to the City's notice in Wards 1,2,3,10 and 11, so past statistics for those Wards can be assumed to relate exclusively to carpenter ants. However, from 1983 on, separate statistics for termite and carpenter ant infestation for all parts of the City are being maintained.

The statistics and maps presented in this report reflect the situation based on the City's Termite Control Program and do not take into account the small number of cases which might have been treated privately and of which the City has no record.

SECTION 1: TERMITE CONTROL

SECTION 1

TERMITE CONTROL

ONE IN FIVE CITY HOUSES LOCATED IN TERMITE-INFESTED BLOCKS

Presently a total of 23,842 or 21% of the City's house-form dwellings (dwellings in non-apartment type residential buildings) are located within 411 City blocks where one or more houses have been infested. The ratio increases every year as infestation is discovered in new blocks.

Of the total stock of roughly 113,000 house-form buildings in the City, infestation (or imminent danger from it) has already been confirmed, to the end of 1986, in 4,893 or 4.3% of the houses. Over three-quarters of the houses (3,699) are located in the East-End (Wards 7-9); the remaining 1,194 cases are in the Central City, Wards 4-6. Since the inception of the termite control program in 1965, two lots were pre-treated in Wards 1 and 2, as a matter of precaution, for the first time in 1985, prior to construction, although no active infestation was discovered in the subject wards.

A ward by ward analysis of the number of house-form dwellings located within the areas (blocks) affected by termites is contained in Appendix 1.5. These areas are shown on Map 4 representing the composite picture to the end of 1986. New areas which were the subject of termite infestation between 1981 and 1986 are shown on Map 5 and listed in Appendix 1.2.

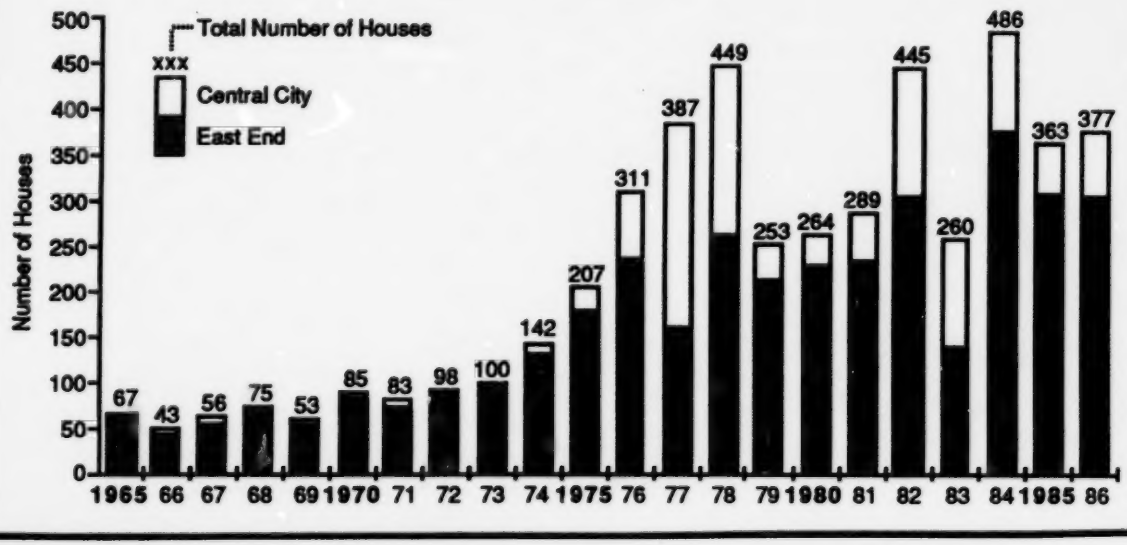
Statistics about the houses treated or approved for treatment from 1965 to 1986, by ward, are provided in Appendix 1.1. The breakdown between the East-End and Central City wards is illustrated by Figure 1.

Figure 1

Incidence of Termite Treatment

City of Toronto

1965-1986



INFESTATION NO LONGER CONFINED TO THE EAST-END

Though the East-End wards still account for the major share, new infestation is being steadily discovered in parts of the Central City (Appendix 1.1 and Table 1.1). The largest number of houses in the City has so far been approved for treatment in Ward 8 followed in decending order by Wards 7, 9, 6, 4 and 5 (Appendix 1.1 and Map 3).

TABLE 1.1

DISTRIBUTION OF HOUSES TREATED OR APPROVED FOR TREATMENT BY PERIOD* AND AREA

Period	East-End (Wards 7-9)		Central City (Wards 4-6)		Total
	#	%	#	%	#
1965-80	2,037	76	636**	24	2,673
1981	236	82	53	18	289
1982	303	68	142	32	445
1983	136	52	124	48	260
1984	379	78	107	22	486
1985	302	83	61	17	363***
1986	306	81	71	19	377
Total	3,699	75	1,194	25	4,893

* Houses are not necessarily treated within the calendar year in which their treatment is approved.

** Including 424 houses in Kensington area treated not under the Termite Control Program but under the Neighbourhood Improvement Program from 1976 to 1978.

*** Excluding two houses already treated chemically and accounted for prior to 1985 but for which grants for wood-soil-separation work were approved in 1985. The two lots in Wards 1 and 2, where no active infestation was found but which were treated before construction of houses, are also excluded.

Readers interested in statistics for any single year from 1965 to 1980 are referred to Appendix 1.2 in Termite Monitor 1985. Appendix 1.1 in this report gives statistics for 1965 and for five year periods, for 1966-1970, 1971-1975 and 1976-1980.

TERMITES IN 13% OF THE CITY BLOCKS

Of the 3,080 City blocks, termite infestation in one or more properties has been documented in 411 or 13.3% of the blocks. In the East-End, the 325 blocks affected, account for about 41% of the blocks in the area. In the Central City, 86 of the 916 blocks or nine percent of the blocks in the area are affected.

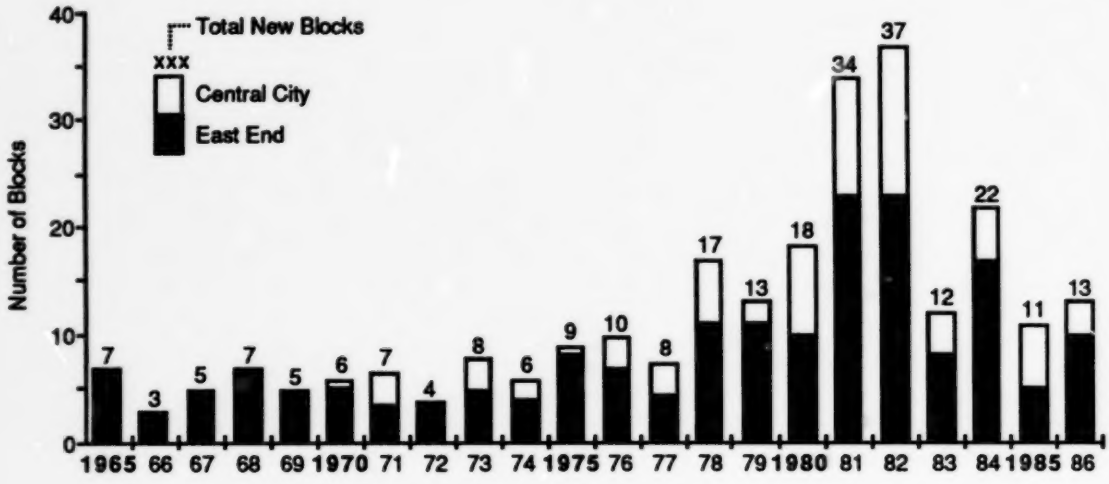
The number of new blocks where infestation has been discovered each year, since 1965, is illustrated by Figure 2.

Figure 2

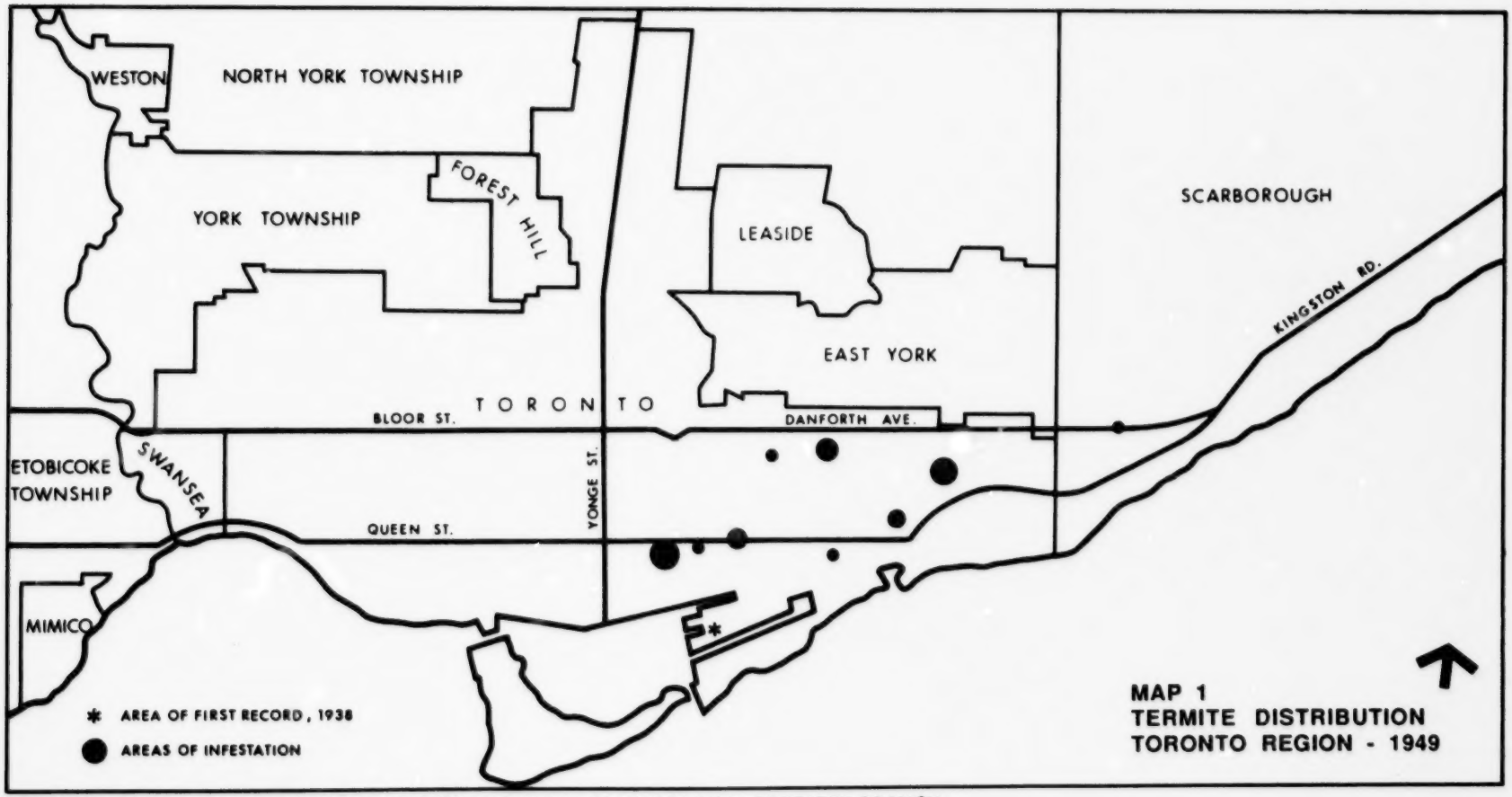
Annual Termite Infestation

New City Blocks

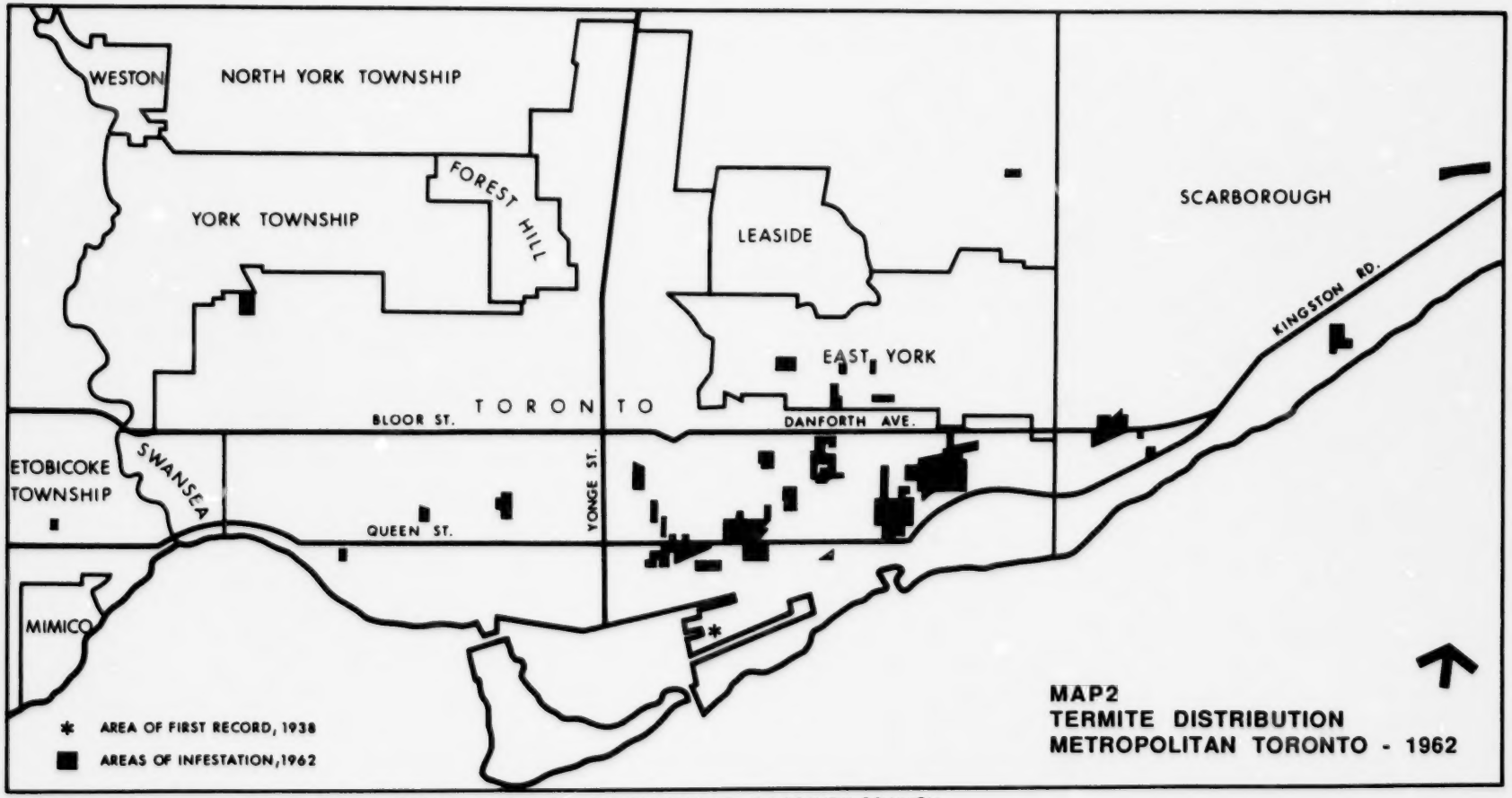
1965-1986



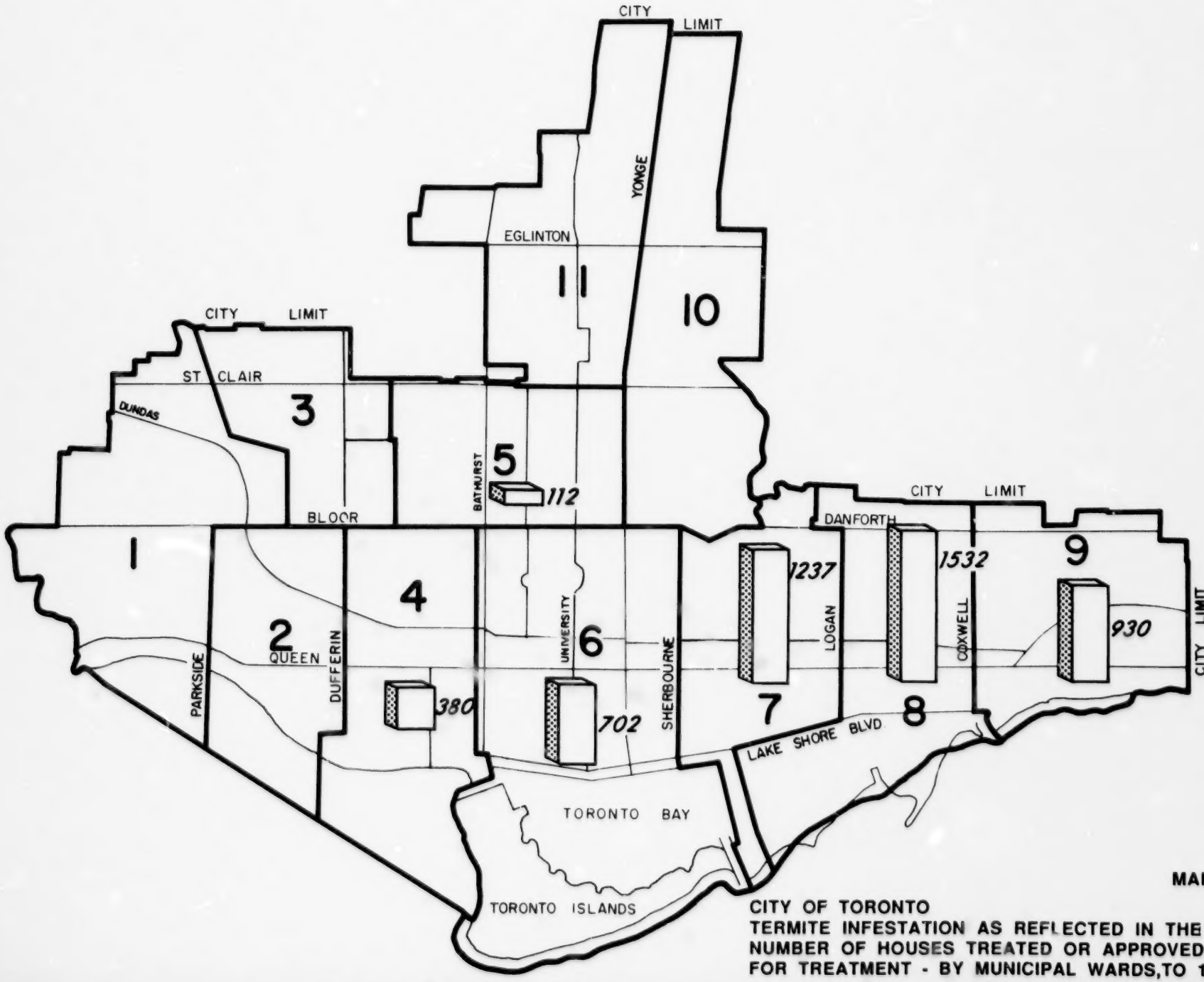
Note:
Infestations had already been recorded in 149 blocks - 138 in the East End and 11 in the Central City before 1965



SOURCE : CANADA DEPARTMENT OF FORESTRY AND RURAL DEVELOPMENT – FORESTRY BRANCH, INFORMATION REPORT 1963-1, APRIL 1963, "TERMITES IN ONTARIO WITH PARTICULAR REFERENCE TO THE TORONTO REGION"

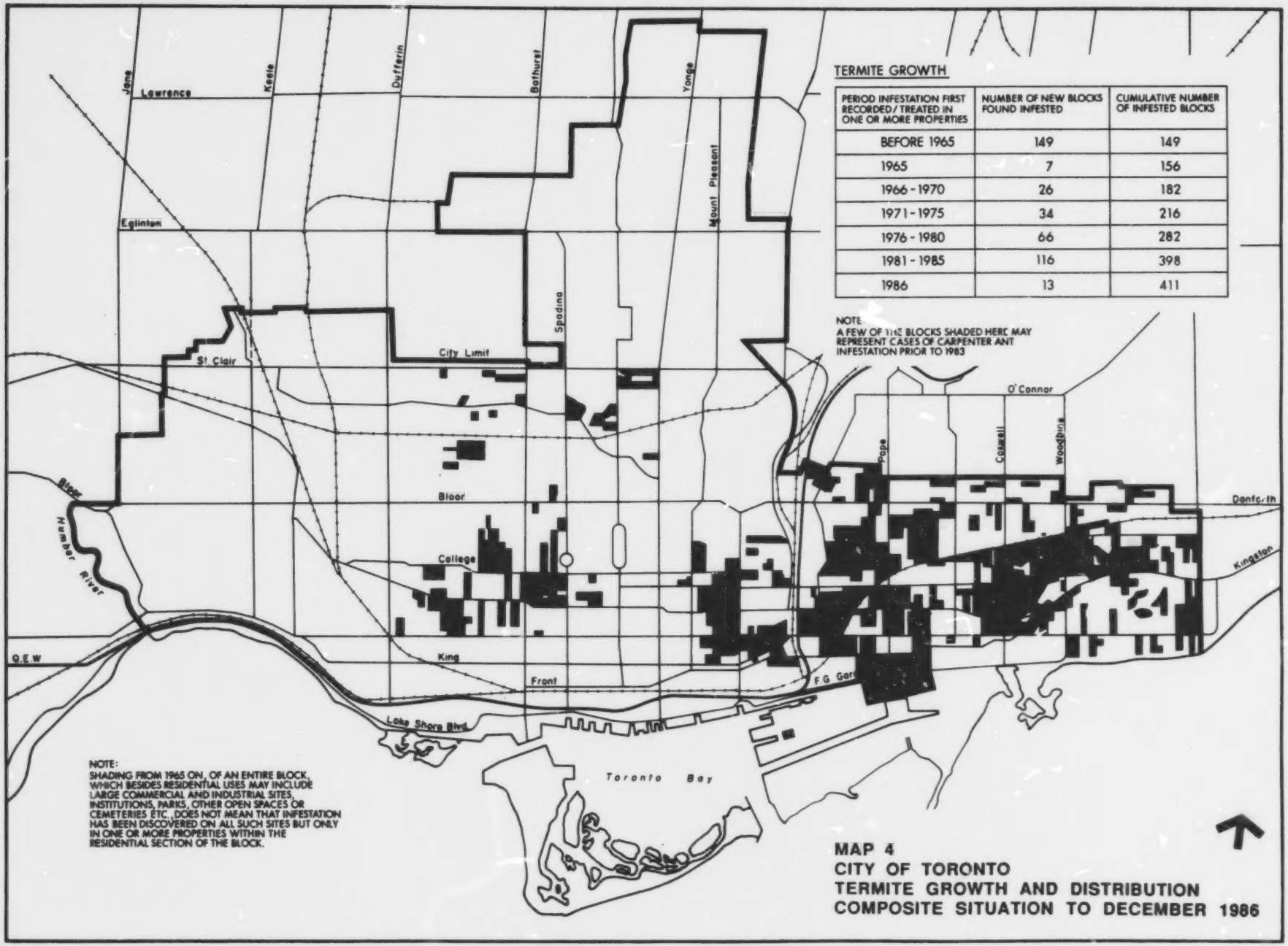


SOURCE : CANADA DEPARTMENT OF FORESTRY AND RURAL DEVELOPMENT – FORESTRY BRANCH, INFORMATION REPORT 1963 – 1, APRIL 1963, "TERMITES IN ONTARIO WITH PARTICULAR REFERENCE TO THE TORONTO REGION"



MAP 3

CITY OF TORONTO
TERMITE INFESTATION AS REFLECTED IN THE NUMBER OF HOUSES TREATED OR APPROVED FOR TREATMENT - BY MUNICIPAL WARDS, TO 1986



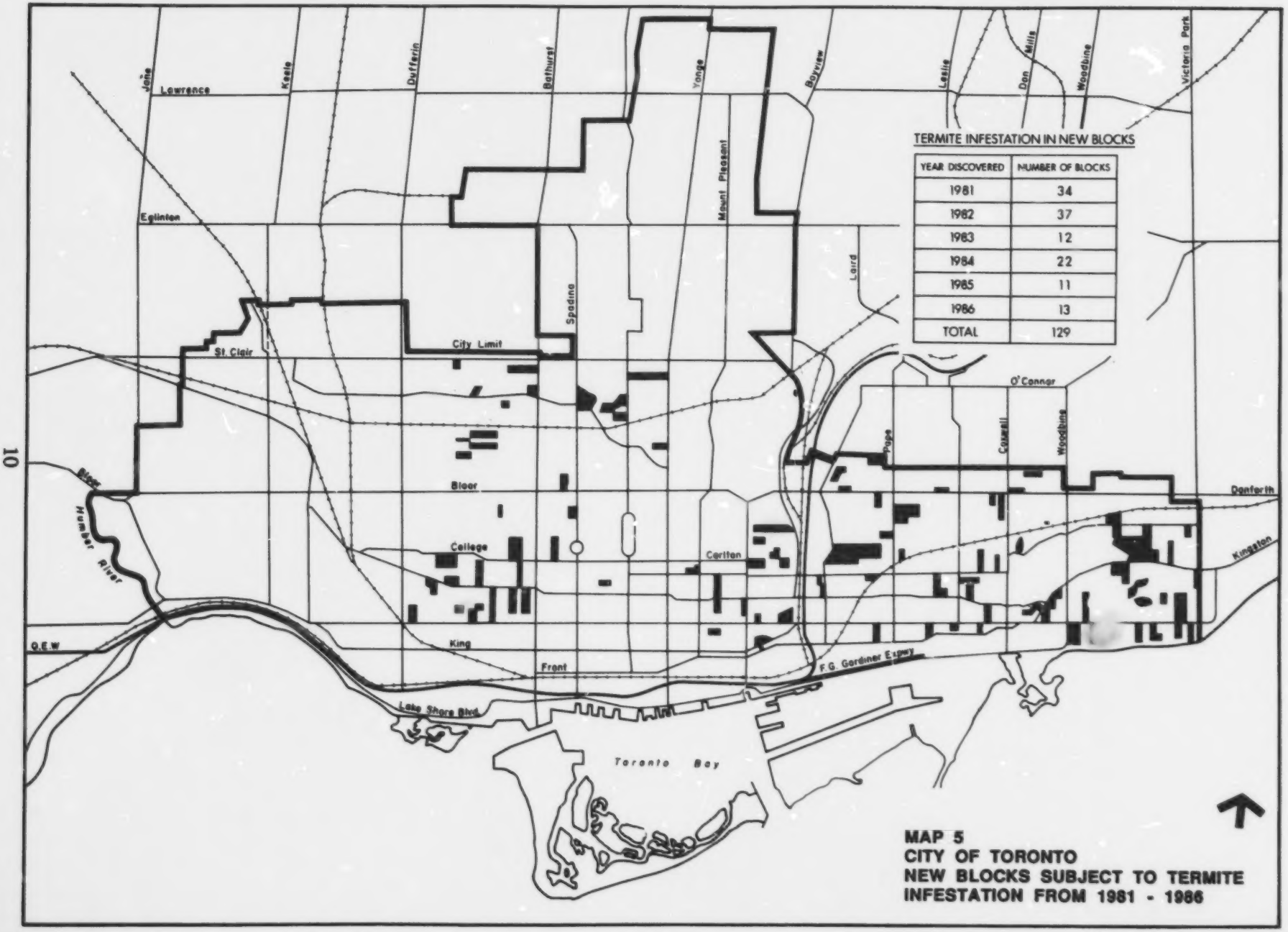
TERMITE GROWTH

PERIOD INFESTATION FIRST RECORDED/ TREATED IN ONE OR MORE PROPERTIES	NUMBER OF NEW BLOCKS FOUND INFESTED	CUMULATIVE NUMBER OF INFESTED BLOCKS
BEFORE 1965	149	149
1965	7	156
1966 - 1970	26	182
1971 - 1975	34	216
1976 - 1980	66	282
1981 - 1985	116	398
1986	13	411

NOTE:
A FEW OF THE BLOCKS SHADED HERE MAY REPRESENT CASES OF CARPENTER ANT INFESTATION PRIOR TO 1983

NOTE:
SHADING FROM 1965 ON, OF AN ENTIRE BLOCK, WHICH BESIDES RESIDENTIAL USES MAY INCLUDE LARGE COMMERCIAL AND INDUSTRIAL SITES, INSTITUTIONS, PARKS, OTHER OPEN SPACES OR CEMETERIES ETC., DOES NOT MEAN THAT INFESTATION HAS BEEN DISCOVERED ON ALL SUCH SITES BUT ONLY IN ONE OR MORE PROPERTIES WITHIN THE RESIDENTIAL SECTION OF THE BLOCK.

MAP 4
CITY OF TORONTO
TERMITE GROWTH AND DISTRIBUTION
COMPOSITE SITUATION TO DECEMBER 1986


Jane
Lawrence
Keele
Dufferin
Bathurst
Yonge
Bayview
Leslie
Don Mills
Woodbine
Victoria Park
Eglinton
Mount Pleasant
Laird
Spadina
St. Clair
City Limit
O'Connor
Pape
Coxwell
Woodbine
Bloor
Danforth
Kingston
College
Carlton
Humber River
King
Front
F.G. Gardiner Expwy
Lake Shore Blvd.
Toronto Bay
TERMITE INFESTATION IN NEW BLOCKS
YEAR DISCOVERED | NUMBER OF BLOCKS
1981 | 34
1982 | 37
1983 | 12
1984 | 22
1985 | 11
1986 | 13
TOTAL | 129
MAP 5
CITY OF TORONTO
NEW BLOCKS SUBJECT TO TERMITE
INFESTATION FROM 1981 - 1986

Mainly because of increased inspection and detection by the City staff and also as a result of greater involvement and financial support from the provincial Ministry of the Environment from 1977 on, there was an overall increase of 90% in the discovery of infested blocks between 1975 and 1986. For the same period, the increase in the East-End was 67% and 309% in the Central City.

The East-End's share of infested blocks dropped from 90% in 1975 to 79% in 1986, while that of the Central City more than doubled from 10% to 21% (Table 1.2).

TABLE 1.2

GEOGRAPHIC DISTRIBUTION OF BLOCKS SUBJECT TO TERMITE INFESTATION BY YEAR

	Cumulative Number of Blocks				
Year	Total	East-End Wards 7-9		Central City Wards 4-6	
		#	%	#	%
1965	156	145	93	11	7
1970	182	170	93	12	7
1975	216	195	90	21	10
1980	282	239	85	43	15
1983	365	293	80	72	20
1984	387	310	80	77	20
1985	398	315	79	83	21
1986	411	325	79	86	21

The highest ratio of infested to total number of blocks was found in Wards 8 and 9 (43% and 42%), followed by Ward 7 (39%), Ward 4 (13%), Ward 5 (10%) and Ward 6 (8%) (Appendix 1.4).

HELP AVAILABLE TO PREVENT AND REMEDY INFESTATION THROUGH TREATMENT

A homeowner can take advantage of the provincial and municipal grants available through the City of Toronto for treatment of termite infestation. The provincial grants can cover 60% of the combined cost of the work, including chemical treatment and wood-soil separation, not exceeding $2,000. A grant which can cover 60% of the cost of chemical treatment not exceeding $1,000, is also available to property owners for the pre-treatment of land on which a house is proposed to be built.

Additionally a grant equal to 25% of the cost of chemical treatment to a maximum of $125 is available to homeowners from the City's own resources. Thus the applicant can be granted a combined total of up to $2,125.

Table 1.3 provides statistics on provincial and City grants from 1983 to 1986.

TABLE 1.3

TERMITE CONTROL GRANTS APPROVED

Year	Provincial Grants					City Grants for Chemical Treatment		Total Grants
	Chemical Treatment		Wood-Soil Separation		Total Prov. Grants			
	#	$	#	$	$	#	$	$
1983	246	69,846	187	145,129	214,975	260	28,457	243,432
1984	470*	149,014	247	247,314	396,328	484*	58,931	455,259
1985	365	122,706	247	299,956	422,662	365	44,860	467,522
1986	374*	181,277	269	280,065	461,342	377*	46,822	508,164

* The significant difference in the number of provincial and City grants in 1984 is accounted for by the applicants who were content with the City grants and did not want to wait until the resumption of provincial grants which remained suspended in most of 1983 and earlier months of 1984. The difference in 1986 is accounted for by two rooming houses and one house treated with nematodes not eligible for provincial grants.

Table 1.4 provides figures on average costs and average provincial grants for chemical treatment and wood-soil speration work and City grants from 1984 to 1986. The higher averages for chemical treatment in 1986 are accounted for mainly by higher liability insurance costs to pest control operators and partly by inflation.

TABLE 1.4

AVERAGE COST AND AVERAGE TERMITE CONTROL GRANT

	Average Cost		Average Prov. Grant		% of Houses Required	Average
Year	Chemical Treatment	Wood-Soil Separation	Chemical Treatment	Wood-Soil Separation	Wood-Soil Separation	Municipal Grant
	$	$	$	$	%	$
1984	531	2,187	317	1,061	53	122
1985	562	2,645	336	1,214	67	123
1986	813	2,099	485	1,041	71	124

FUNDS RECEIVED FROM THE PROVINCE SINCE 1984

Prior to 1984, provincial grants were approved on the City's recommendation and were distributed directly by the Ministry of the Environment. Under a revised agreement in 1984, the Province delegated the approval and distribution of provincial grants to the City.

Following is an account of the funds received by the City, from the Province, and committed towards chemical treatment and wood-soil separation grants since May 1984.

Provincial Funds Received

. May 2, 1984	$ 101,457	
. May 3, 1984	265,000	
. February 27, 1985	298,485	
. November 20, 1985	296,897	
. August 15, 1986	325,200	
TOTAL RECEIVED		$1,287,039

Provincial Funds Committed

. Grants already approved by the province prior to suspension of program in 1983	$ 101,457	
. Grants approved by the City (on behalf of the province) since the resumption of the program to the end of 1986	1,203,627	
TOTAL COMMITTED		1,305,084
Commitment in excess of funds received		$ 18,045

The amount of $18,045 committed to provincial grants in excess of funds received in 1986, will be recouped from provincial funds to be received in 1987.

GRANTS FOR PRE-TREATMENT OF RESIDENTIAL SITES

As a preventive measure, one grant in 1984 and two in 1985 respectively, were awarded to eligible owners for chemical treatment of sites prior to construction of houses. In addition, sites are also pre-treated privately by house builders/contractors who do not qualify under the grants program.

TREATMENT QUITE EFFECTIVE, BUT TERMITES CAN MOVE ONTO UNPROTECTED PROPERTIES

In spite of concerns of an environmental nature, chemical treatment with chlordane and aldrin, predominantly used at the present, in the absence of equally effective and safer alternatives, has proved to be quite effective and long lasting if applied properly, coupled with breaking of direct contact of wooden members of structures with the soil where necessary.

Any possible harmful effects can almost be eliminated if occupants avoid growing root crops in the treated areas immediately adjacent to the building walls. The effectiveness of treatment, coupled with precautionary measures of a physical nature, has been documented by results of follow-up surveys on treated properties. A survey conducted in 1981 showed that in the houses treated between 1965 and 1980, reinfestation had occurred in only about 4%. In many cases, these re-infestations occurred in houses where wood-soil contact had not been broken. However, treatment does not eradicate the deeply buried termite colonies from which the insects go out foraging and attack yet untreated properties in the neighbourhood.

CITY PROGRESSING TO MORE EFFECTIVE CONTROL MANAGEMENT

From late 1982 to April 1984 the City retained the services of entomologist Dr. Richard Carr to advise on termite control management. According to Dr. Carr's assessment Toronto was among:

> "the most progressive of all the world's governments in the implementation of a working urban pest control program. Only California and Florida in the U.S. approach the level of concern and effort that the Canadians of Ontario have put forth to protect their wood-bearing structures from the depredations of wood-destroying insects."

The City's concerted effort over the last five years in dealing more effectively with the termite problem, can be summarized as follows:

- Increase in the administrative and inspection staff required to accelerate the processing of applications and subsequent inspections.
- Introduction of basic courses on wood-destroying insects designed and initially conducted for inspectors by Dr. Richard Carr in 1983.
- Establishment (by the Planning and Development and Buildings and Inspections Departments) of a joint process for regular monitoring and evaluation of the control program.

- Follow-up surveys of treated properties to periodically assess the effectiveness of treatment.

- Beginning in 1984, the transfer of responsibility for distribution of provincial grants from the Ministry of the Environment to the City, reducing considerably the time taken in paying money to the approved applicants.

- Strengthening the preventive measures by amending (through By-law 488-82) the Termite Control By-law No. 189-73, requiring pre-treatment of all sites where structural members are used.

- Recognition of the need for a program of public awareness and alerting the citizens to the problem of termites. However, such a program has been kept relatively modest in view of the limited funds available from the Province as well as the limited capacity of the pest control industry to handle increased workloads.

- Because of environmental concerns about the use of toxic chemicals, the decision by the City in 1986 to allow the homeowners the option of biological treatment of termites through the use of nematodes on an experimental basis.*

- The establishment of a special task force in 1984, representing the City, University of Toronto, the provincial and federal goverments and private industry to monitor and advise the Buildings and Inspections Department in the work of termite suppression.

- Emanating from the recommendations of Dr. Carr, the establishment of a project at the Faculty of Forestry of the University of Toronto to provide termite-related research and technical support to the City as well as the provincial and federal governments.

* Nematodes are a kind of microscopic organisms which, their promotors claim, can destroy termites without harmful environmental effects. After they are released into the soil, the nematodes seek out and enter the insects through natural openings and release bacteria into the blood system which kills the termites. Though the Province is not yet committed to allowing its grants to be used for treatment by this particular method, until enough scientific information is available as to its effectiveness, the City's Buildings and Inspections Department can make its own grants available to a maximum of $125.00 for treatment by nemtodes. However, the owners who chose their soil to be treated with this method will still be eligible for the usual provincial grants for breaking the wood-soil contact. In 1986 one owner in Ward 4 had his house treated

with nematodes at a cost of $220 and received the City of Toronto grant of $55 plus the provincial grant for wood-soil separation work.

TERMITE RESEARCH PROJECT ESTABLISHED AT THE UNIVERSITY OF TORONTO

Dr. Carr's recommendation had originally envisaged the creation of a chair of urban entomology at the University of Toronto. However, after considerable thought and consultation between representatives of the University of Toronto, various municipalities, the Government of Ontario, the Canada Mortgage and Housing Corporation and interested professional organizations, the concept was modified to establish a specific urban entomology research project. On January 27, 1986 Toronto City Council adopted a revised proposal for a five-year project, instead of a chair, at the University of Toronto. The project is estimated to cost $1.5 million, and is proposed to be funded by the City of Toronto, other municipalities affected by termites in southern Ontario, the Government of Ontario, the Canada Mortgage and Housing Corporation, and possibly some private organizations. The City has already committed $200,000, at the rate of $50,000 each year in its Budget for 1985, 1986, 1987 and 1988. The Canada Mortgage and Housing Corporation has pledged $150,000 to be appropriated in the amount of $50,000 each year in its budget for 1986, 1987 and 1988. The Ontario Ministry of the Environment, which finances the termite control grants, has committed $100,000 for 1987, for the research project.

Although over two dozen municipalities in southern Ontario are affected by termites,so far only six have either financially committed or contributed towards the project. Total commitments to the project amount to $613,810 of which the University has so far received $128,902 (Table 1.5).

TABLE 1.5

COMMITMENT AND CONTRIBUTION OF FUNDS FOR TERMITE RESEARCH PROJECT

Source	Commitment	Contribution Received
1. Canada Mortgage and Housing Corporation	150,000	
2. Ontario Ministry of the Environment	100,000	
3. Town of Dresden	247	247
4. City of Etobicoke	30,000	10,000
5. City of Guelph	22,965	7,655
6. City of North York	56,000	
7. City of Scarborough	43,598	
8. City of Toronto	200,000	100,000
9. George Cedric Metcalfe charitable foundation	10,000	10,000
10. Toronto Real Estate Board	1,000	1,000
TOTAL	$613,810	$128,902

Further commitments and contributions are expected from:

- Borough of East York
- City of Hamilton
- City of Mississauga
- Town of Oakville
- Ontario Real Estate Association

The following professional organizations have already passed resolutions in support of the research project:

1. Association of Municipalities of Ontario, December 7, 1985,

2. Canadian Association of Housing and Renewal Officials, May 26, 1986, and

3. Ontario Building Officials Association, October 21, 1986.

Following the appointment of Dr. J. Kenneth-Grace, as its director, the project started at the Faculty of Forestery, University of Toronto, effective January 1987.

TERMITE CONTROL STATISTICS, APPENDICES:

APPENDIX 1.1

DISTRIBUTION OF HOUSES TREATED/APPROVED FOR TREATMENT UNDER THE TERMITE CONTROL PROGRAM BY YEAR AND WARD, 1965 - 1986

	Central City Wards				East-End Wards				
Year	4	5	6	Total 4-6	7	8	9	Total 7-9	Total
1965					1	54	12	67	67
1966-70	1		9	10 3%	60	193	49	302 97%	312 100%
1971-75	16	1	42	59 9%	205	248	118	571 91%	630 100%
1976-80	80	10	477	567 34%	499	359	239	1,097 66%	1,664 100%
1981	32	12	9	53	89	65	82	236	289
1982	58	42	42	142	91	96	116	303	445
1983	56	34	34	124	40	60	36	136	260
1984	70	6	31	107	103	154	122	379	486
1985	29	5	27	61	86	134	82	302	363
1981-85	245	99	143	487 26%	409	509	438	1,356 74%	1,843 100%
1986	38	2	31	71	63	169	74	306	377
1965-86	380	112	702	1,194 24.4%	1,237	1,532	930	3,699 75.6%	4,893 100%

Note:

- Ward 6 figures up to 1980 include 424 houses treated under Kensington Neighbourhood Improvement program: 1976 - 28; 1977 - 224; and 1978 - 172.
- Wards 1, 2, 3, 10 and 11, where all cases involved carpenter ants, not termites, are not included. Figures up to 1982 for Wards 4-9 might possibly include a small number of carpenter ant cases which it is not possible to separate before 1983 because of the manner in which records were maintained.
- The total for 1985 does not include two lots in Wards 1 and 2, where termite control grants were given for pre-treatment of sites before construction, although no active infestation was discovered in the two Wards. It also does not include two houses in Wards 4 and 8, where infestation had already been treated chemically and accounted for prior to 1985 and where grants approved in 1985 were only for wood-soil-separation work.
- Readers interested in statistics for any single year from 1966 to 1980 are referred to Termite Monitor 1985.

APPENDIX 1.2(A)

GEOGRAPHIC DISTRIBUTION OF NEW CITY BLOCKS BECOMING SUBJECTED TO TERMITE INFESTATION* BY SIZE OF HOUSE-FORM DWELLING STOCK, SINCE 1981

1981

No.	Municipal Ward, Division and Block Number (1)	Block Size (total house-form dwelling stock) (2)	
1	4-2-14	55	
2	4-2-16	87	
3	4-2-18	23	165
1	5-1-02	17	
2	5-1-61	117	
3	5-2-37	59	
4	5-3-30	11	
5	5-4-25	28	232
1	6-5-44	180	
2	6-5-45	137	
3	6-7-44	36	353
1	7-1-60	30	
2	7-4-20	8	
3	7-4-47	58	
4	7-5-08	169	
5	7-5-39	9	
6	7-5-42	46	
7	7-5-53	38	358
1	8-3-13	77	
2	8-3-25	131	
3	8-3-46	112	
4	8-5-21	92	412
1	9-1-04	186	
2	9-1-06	69	
3	9-1-14	34	
4	9-1-19	33	
5	9-1-21	10	
6	9-1-28	33	
7	9-2-19	54	
8	9-3-18	85	
9	9-3-39	72	
10	9-3-44	30	
11	9-4-17	53	
12	9-6-17	49	708
34	TOTAL		2,228

* Where infestation was recorded or treated for the first time in the given year in one or more properties.

1 The three numbers denote municipal ward, division and block numbers respectively in that order. The identification is based on a map of the City of Toronto, which shows boundaries and numbering of each of those areas.

2 Block size is expressed in terms of existing stock of house-form (non-apartment type) dwellings i.e. sum total of owner occupied, tenant occupied and owner/tenant occupied dwellings in each block, based on the City of Toronto data from the Standard Assessment System (SAS) of the Ontario Ministry of Revenue.

APPENDIX 1.2(B)

1982

No.	Municipal Ward, Division and Block Number (1)	Block Size (total house-form dwelling stock) (2)	
1	4-3-15	128	
2	4-3-29	59	
3	4-4-04	93	280
1	5-1-64	55	
2	5-3-09	131	
3	5-3-20	13	
4	5-3-65	35	
5	5-4-19	44	
6	5-4-21	27	
7	5-4-24	91	
8	5-4-32	25	421
1	6-4-51	7	
2	6-6-33	37	
3	6-7-15	89	133
1	7-2-03	20	
2	7-3-29	47	
3	7-4-15	51	
4	7-4-36	56	
5	7-4-46	57	
6	7-5-06	100	
7	7-5-09	145	476
1	8-1-27	37	
2	8-4-02	22	
3	8-4-17	50	
4	8-4-62	51	
5	8-5-30	62	222
1	9-1-26	36	
2	9-2-04	49	
3	9-2-08	35	
4	9-3-17	84	
5	9-3-22	28	
6	9-3-24	29	
7	9-3-40	13	
8	9-3-54	29	
9	9-5-26	43	
10	9-5-30	26	
11	9-5-31	32	404
37	TOTAL		1,936

1 The three numbers denote municipal ward, division and block numbers respectively in that order. The identification is based on a map of the City of Toronto, which shows boundaries and numbering of each of those areas.

2 Block size is expressed in terms of existing stock of house-form (non-apartment type) dwellings i.e. sum total of owner occupied, tenant occupied and owner/tenant occupied dwellings in each block, based on the City of Toronto data from the Standard Assessment System (SAS) of the Ontario Ministry of Revenue.

APPENDIX 1.2(C)

1983

No.	Municipal Ward, Division and Block Number (1)	Block Size (total house-form dwelling stock) (2)	
1	4-2-29	70	
2	4-3-28	86	156
1	5-1-69	70	
2	5-3-47	52	122
1	7-4-19	32	
2	7-4-48	38	70
1	8-3-49	43	
2	8-4-06	92	
3	8-4-24	70	
4	8-5-36	54	259
1	9-6-01	34	
2	9-6-28	57	91
12	TOTAL		698

1 The three numbers denote municipal ward, division and block numbers respectively in that order. The identification is based on a map of the City of Toronto, which shows boundaries and numbering of each of those areas.

2 Block size is expressed in terms of existing stock of house-form (non-apartment type) dwellings i.e. sum total of owner occupied, tenant occupied and owner/tenant occupied dwellings in each block, based on the City of Toronto data from the Standard Assessment System (SAS) of the Ontario Ministry of Revenue.

APPENDIX 1.2(D)

1984

No.	Municipal Ward, Division and Block Number (1)	Block Size (total house-form dwelling stock) (2)	
1	4-2-03	79	
2	4-3-13	145	
3	4-2-47	61	285
1	6-6-32	37	
2	6-6-67	9	46
1	7-2-06	29	
2	7-2-14	8	
3	7-4-13	47	
4	7-4-34	38	
5	7-5-34	64	186
1	8-3-29	39	
2	8-3-33	98	
3	8-4-10	43	
4	8-4-22	51	
5	8-4-29	120	351
1	9-1-01	50	
2	9-2-15	59	
3	9-4-48	18	
4	9-4-62	84	
5	9-6-02	58	
6	9-6-18	31	
7	9-6-21	60	360
22	TOTAL		1,228

1 The three numbers denote municipal ward, division and block numbers respectively in that order. The identification is based on a map of the City of Toronto, which shows boundaries and numbering of each of those areas.

2 Block size is expressed in terms of existing stock of house-form (non-apartment type) dwellings i.e. sum total of owner occupied, tenant occupied and owner/tenant occupied dwellings in each block, based on the City of Toronto data from the Standard Assessment System (SAS) of the Ontario Ministry of Revenue.

APPENDIX 1.2(E)

1985

No.	Municipal Ward, Division and Block Number (1)	Block Size (total house-form dwelling stock) (2)	
1	4-3-01	133	
2	4-3-23	33	
3	4-4-01	69	
4	4-4-45	58	293
1	5-1-72		63
1	6-5-60		41
1	7-1-50		11
1	8-1-25	47	
2	8-1-30	181	228
1	9-4-27	76	
2	9-6-05	147	223
11	TOTAL		859

1 The three numbers denote municipal ward, division and block numbers respectively in that order. The identification is based on a map of the City of Toronto, which shows boundaries and numbering of each of those areas.

2 Block size is expressed in terms of existing stock of house-form (non-apartment type) dwellings i.e. sum total of owner occupied, tenant occupied and owner/tenant occupied dwellings in each block, based on the City of Toronto data from the Standard Assessment System (SAS) of the Ontario Ministry of Revenue.

APPENDIX 1.2(F)

1986

No.	Municipal Ward, Division and Block Number (1)	Block Size (total house-form dwelling stock) (2)	
1	4-2-24		54
1	5-1-65		66
1	6-6-66		22
1	7-4-16		44
1	8-1-40	33	
2	8-4-15	66	
3	8-4-33	23	
4	8-4-63	29	
5	8-4-65	13	164
1	9-3-03	120	
2	9-3-52	55	
3	9-5-27	38	
4	9-6-16	61	274
13	TOTAL		624

1 The three numbers denote municipal ward, division and block numbers respectively in that order. The identification is based on a map of the City of Toronto, which shows boundaries and numbering of each of those areas.

2 Block size is expressed in terms of existing stock of house-form (non-apartment type) dwellings i.e. sum total of owner occupied, tenant occupied and owner/tenant occupied dwellings in each block, based on the City of Toronto data from the Standard Assessment System (SAS) of the Ontario Ministry of Revenue.

APPENDIX 1.3

DISTRIBUTION OF CITY BLOCKS BECOMING SUBJECTED TO TERMITE INFESTATION* BY PERIOD AND WARD, TO 1986

	Central City Wards			East-End Wards			
Period	4	5	6	7	8	9	Total
Before 1965	2		9	45	38	55	149
1965					7		7
1966-70	1			8	13	4	26
1971-75	4	1	4	10	8	7	34
1976-80	3	6	13	13	17	14	66
1981	3	5	3	7	4	12	34
1982	3	8	3	7	5	11	37
1983	2	2		2	4	2	12
1984	3	-	2	5	5	7	22
1985	4	1	1	1	2	2	11
1981-85	15	16	9	22	20	34	116
1986	1	1	1	1	5	4	13
Total	26	24	36	99	108	118	411

* Where infestation was recorded or treated for the first time in the given period in one or more properties.

Readers interested in statistics for any single year, from 1966 to 1980, are referred to Appendix 1.2 in Termite Monitor 1985.

APPENDIX 1.4

DISTRIBUTION OF BLOCKS BY TOTAL NUMBER AND NUMBER OF TERMITE INFESTED BLOCKS BY WARD TO THE END OF 1986

Ward	Total # of Blocks	Number of Infested Blocks			Infested as % of Total Blocks
		Where Houses Treated*	Where No Houses Treated**	Total	
4	204	26		26	13
5	251	24		24	10
6	461	31	5	36	8
7	251	82	17	99	39
8	251	100	8	108	43
9	281	104	14	118	42
Total	1,699	367	44	411	24

* One or more houses within the block treated or approved for treatment under the Termite Control Program.

** Infestation in these blocks was detected before 1965 but no houses treated or approved for treatment yet under the Termite Control Program (Appendices 1.2 and 1.3).

APPENDIX 1.5

DISTRIBUTION OF HOUSE-FORM DWELLING STOCK*, HOUSES TREATED/ APPROVED FOR TREATMENT AND STOCK LOCATED WITHIN TERMITE INFESTED BLCOKS, BY WARD TO THE END OF 1986

		Treated or Approved for Treatment			Total Located Within Infested Blocks		
Ward	House-Form Dwelling Stock Within the Ward	Number	As % of Total Stock	As % of Stock In Infested Blocks	Where Houses Treated under the program (a)	Other (b)	Total (a) + (b)
4	8,500	380	4	19	2,006		2,006
5	11,424	112	1	7	1,616		1,616
6	6,322	702	11	37	1,875	29	1,904
7	6,649	1,237	19	28	4,073	329	4,402
8	13,041	1,532	12	20	7,287	192	7,479
9	13,115	930	7	14	5,779	656	6,435
Total	59,051	4,893	8	21	22,636	1,206	23,842

* Dwellings in non-apartment type buildings (mainly in the owner-occupied, tenant-occupied and owner/tenant-occupied dwelling categories) based on the City of Toronto data from the Standard Assessment System of the Ontario Ministry of Revenue, 1981-1986.

(a) In the 367 blocks where one or more houses treated or approved for treatment under the Termite Control Program (Appendix 1.4).

(b) In the 44 blocks found infested (and therefore presumably treated) before 1965 but where no house yet treated or approved for treatment under the Termite Control Program (Appendix 1.4).

SECTION 2: CARPENTER ANT CONTROL

SECTION 2

CARPENTER ANT CONTROL

Although the enabling provincial legislation, as well as the City's Termite Control Program apply to all wood-destroying insects including carpenter ants, provincial grants are available only for treatment of termite infestation. However, the City of Toronto has been providing carpenter ant control grants from its own funds since 1966. Compared with termites, carpenter ants pose a considerably lesser threat and can be treated more easily at a smaller cost. However, treatment for carpenter ants lasts for a relatively shorter period compared with that for termites, so it has to be repeated if infestation recurs.

Carpenter Ants Not as Serious a Threat as Termites

Compared with the scale of termite infestation - measured in terms of the number of houses and city blocks which have been subjected to infestation - a smaller number of areas and properties has been affected by carpenter ants (Table 2.1 and 2.2, Map 6 and Appendices).

The City had been getting carpenter ant control grant applications in small numbers since 1966, but in the last few years the numbers have been increasing because of greater awareness of the problem. Cases of carpenter ant infestation are widely scattered. For example, the average number of applications approved per block, where infestation has been reported since 1966, is only 1.3. In 1983, the first year that accurate statistics on carpenter ants began to be maintained, the north-end Wards, 10 and 11 accounted for a large number of grant applications, but the pattern seems to have changed in 1985 and 1986 as other wards accounted for the majority of applications (Table 2.1).

TABLE 2.1

DISTRIBUTION OF HOUSES TREATED OR APPROVED FOR TREATMENT FOR CARPENTER ANTS BY PERIOD AND WARD

	Wards							
Period	1 - 3		4 - 9		10 - 11		Total	
	#	%	#	%	#	%	#	%
1966-80	11	22	*	*	40	78	51	100
1981	1	4	*	*	24	96	25	100
1982	3	8	*	*	34	92	37	100
1983	--	--	22	37	37	63	59	100
1984	2	7	11	35	18	58	31	100
1985	2	6	20	57	13	37	35	100
1986	2	6	20	65	9	29	31	100
Total	21	8	73	27	175	65	269	100

* No figures were available for Wards 4-9 prior to 1983. Please see notes regarding Appendices 2.1 and 2.2.

TABLE 2.2

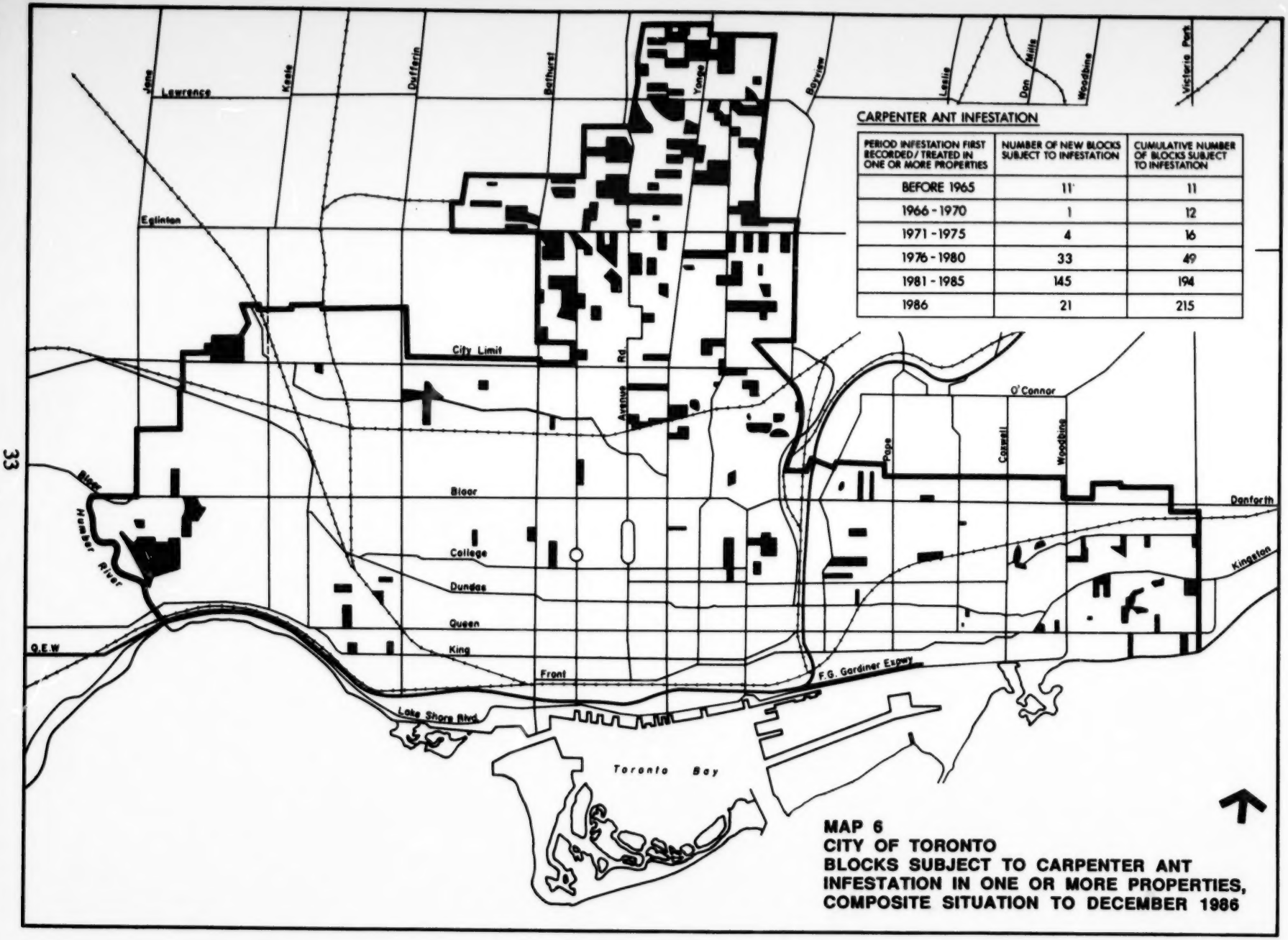
CUMULATIVE NUMBER OF BLOCKS WHERE ONE OR MORE PROPERTIES RECORDED INFESTED FOR THE FIRST TIME BY CARPENTER ANTS BY SELECTED YEAR AND WARD

	Wards							
Year	1 - 3		4 - 9		10 - 11		Total	
	#	%	#	%	#	%	#	%
1980	9	18	*	*	40	82	49	100
1985	17	9	43	22	134	69	194	100
1986	19	9	58	27	138	64	215	100

* No figures were available for Wards 4-9 prior to 1983. Please see notes regarding Appendices 2.1 and 2.2.

Carpenter Ant Control Grants Solely Funded by the City

Carpenter ant control grants are awarded entirely from the City's own resources. Applicants can get 25% of the cost of chemical treatment to a maximum of $125. In 1986, the City awarded 31 grants amounting to $2,191.25. The average cost of treatment was $284 and the average grant was $70.68.



CARPENTER ANT INFESTATION

PERIOD INFESTATION FIRST RECORDED / TREATED IN ONE OR MORE PROPERTIES	NUMBER OF NEW BLOCKS SUBJECT TO INFESTATION	CUMULATIVE NUMBER OF BLOCKS SUBJECT TO INFESTATION
BEFORE 1965	11	11
1966 - 1970	1	12
1971 - 1975	4	16
1976 - 1980	33	49
1981 - 1985	145	194
1986	21	215

MAP 6
CITY OF TORONTO
BLOCKS SUBJECT TO CARPENTER ANT INFESTATION IN ONE OR MORE PROPERTIES, COMPOSITE SITUATION TO DECEMBER 1986

CARPENTER ANT CONTROL STATISTICS, APPENDICES:

CARPENTER ANT CONTROL STATISTICS: APPENDICES

Note re Appendices 2.1, 2.2 and Map 6

1. Since the beginning of the City's termite control program in 1965 only carpenter ant and no termite infestation cases seem to have been discovered in Wards 1, 2, 3, 10 and 11. Therefore, the statistics for these areas can be assumed to represent cases of carpenter ant infestation exclusively.

2. With respect to Wards 4 to 9, it is important to point out that the actual number of houses and blocks would be somewhat higher than indicated by Appendices 2.1 and 2.2 or the tables. In the areas in questions, both kinds of infestation occurred, but because of the difficulty of separating carpenter ant cases from those of termites due to the manner in which records were maintained before 1983, it is not possible to fully document carpenter ant cases prior to 1983. However, since the number of such cases would be small, it does not significantly influence the assessment of the carpenter ant problem in the City.

APPENDIX 2.1

DISTRIBUTION OF HOUSES TREATED OR APPROVED FOR TREATMENT FOR CARPENTER ANTS BY WARD AND YEAR

	Wards											
Year	1	2	3	4	5	6	7	8	9	10	11	Total
1966		2									2	4
1974			1									1
1975										1	2	3
1976										1	1	2
1977										2		2
1978		6								2	3	11
1979		1								7	8	16
1980	1									3	8	12
1981	1									12	12	25
1982	2		1							13	21	37
1983					3	1	4	2	12	15	22	59
1984	1		1		2	1	2		6	9	9	31
1985	1		1		1	1	6	5	7	7	6	35
1986	1	1		1	1		4	1	13	3	6	31
Total	7	10	4	1	7	3	16	8	38	75	100	269

Note:

The total for Wards 4 to 9 would be somewhat higher than indicated here as explained in the notes regarding the Appendices.

APPENDIX 2.2

DISTRIBUTION OF BLOCKS WHERE CARPENTER ANT INFESTATION WAS FOR THE FIRST TIME RECORDED IN ONE OR MORE PROPERTIES BY PERIOD AND WARD

	Wards											
Period	1	2	3	4*	5*	6*	7*	8*	9*	10	11	Total
Before 1966	2	1								4	4	11
1966-70		1										1
1971-75			1							1	2	4
1976-80	1	3								12	17	33
1981	1									8	10	19
1982	2		1							9	17	29
1983					2	1	4	2	8	10	17	44
1984	1		1		2	1	2		5	7	7	26
1985	1		1		1	1	4	5	5	5	4	27
Sub-total 1981-85	5		3		5	3	10	7	18	39	55	145
1986	1	1		1	1		3	1	9	1	3	21
Grand Total	9	6	4	1	6	3	13	8	27	57	81	215

Note:

* As explained in notes regarding appendices, the block total in Wards 4 to 9 would possibly be somewhat higher than indicated here.

Readers interested in statistics for a specific year from 1966 to 1980, are referred to Appendix 2.2 in Termite Monitors 1985 and 1986.